DOCUMENT RESUME

ED 083 164 SP 006 950

AUTHOR	Berg, L. L.; And Others
TITLE	Individualization of Instruction: Flexible Scheduling. Education Monograph No. 4.
INSTITUTION	Montana Univ., Missoula. Div. of Educational Research and Services.
PUB DATE	Nov 70
NOTE	14p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Course Organization; *Curriculum Development; *Flexible Scheduling; *Schedule Modules; *Scheduling; *Time Blocks

ABSTRACT

Flexible modular scheduling is discussed as a means for achieving individualized instruction in the classroom. Scheduling, in general, is presented as a compromise among four elements: a) individualizing the educational program for each student, b) utilizing available facilities, c) utilizing available staff, and d) capitalizing on staff competencies. Variable schedules, or blocks of instruction time, are also examined as they lend themselves to instruction cycling. Flexible modular scheduling, or schedules of small blocks of time, is discussed finally in relation to both alternative and traditional forms of scheduling. (For related documents, see SP 006 948-49, 951-53.) (BRB)

FOREWORD

You may have heard recently the phrase, "Now that we have achieved education for all, let us seek education for each." We certainly have nearly achieved education for all, and we have it within our power to achieve education for each, but to do so we must change markedly in the next decade and constantly examine new avenues which seem to offer realistic improvements for the teaching-learning process.

This monograph series is designed to set forth what is the most enlightened thought in the field. New ideas will be presented with the hope that some implementation will follow.

While we will not be advocating any one specific course or another, we believe it to be necessary to give currency to new and viable solutions to some of the problems that face us in today's complex world. Educators will not find specific recipes to educational problems in this brief paper, but it is hoped that they will find meaningful and useful ideas, directions, and procedures. From this point of view, practicing educators, and others, should find the information contained in the educational monographs of considerable value and assistance. How well we accomplish our purposes will eventually be for our children to witness or censure.

J. Francis Rummel
Dean, School of Education
University of Montana
Missoula, Montana

FILMED FROM BEST AVAILABLE COPY

ED 083164

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

INDIVIDUALIZATION OF INSTRUCTION:

FLEXIBLE SCHEDULING

by

L.L. Berg, J.J. Hunt, and A.F. McLean

Dr. Lyle Berg is an Assistant Professor of Education at the University of Montana and Director of the Division of Educational Research and Services.

Dr. John Hunt is an Associate Professor of Education at the University of Montana and a Special Consultant to the Division of Educational Research and Services. He is the co-author of the noted publication Rx for Team Teaching.

Mr. Alf McLean formerly was a Research Assistant with the Division of Educational Research and Services at the University of Montana and currently is doing administrative work in the Calgary Separate School System, Calgary, Alberta.

EDUCATION MONOGRAPH NO. 4

November, 1970

Published

by

The Division of Educational Research and Services

School of Education

University of Montana

Missoula, Montana

SP 006 950

This publication is the fourth in a series of articles discussing the topic of Individualization of Instruction.

SCHEDULING

Flexible scheduling has become a very popular term throughout the field of education, and in some instances has been used interchangeably with: modular scheduling, flexible modular scheduling, flexible programming, variable scheduling, individualized instruction, and other "in" terminology.

According to Manlove and Beggs, "Flexible implies variability, pliability, fluidity; schedule implies uniformity, regularity, stability."[1] This definition further illustrates a pressing need in education, that of clearly defining terminology which will enhance communication and, subsequently, implementation of instructional programs. Regardless of the name(s) individually or group assigned to the many techniques of scheduling, it would appear that a compromise of at least four elements is involved. These four elements are: 1) providing an individualized educational program for each student, 2) utilizing available facilities, 3) utilizing available staff, and 4) capitalizing on staff competencies (individual and group).

The major function of a schedule is to implement an instructional program; therefore, it does not begin nor end with the physical manipulation of time tables. The schedule includes an overall sequence involving planning, organizing, implementing, and evaluating by all persons directly and/or indirectly affected by the total process.

---

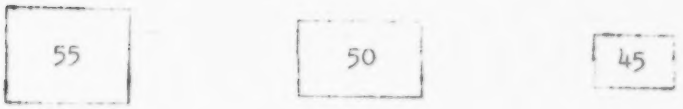
[1]Donald C. Manlove, and David W. Beggs III, Flexible Scheduling, Bold New Venture (Bloomington: Indiana University Press, 1965), p. 22.

Structure and rigidity are often used synonomously when actually there is a distinct difference between the two words when they are used with reference to scheduling. The more highly structured a schedule is, the more flexible it becomes because of the increased number of alternatives that are available to the participants. A flexible schedule offers many alternatives and increased provisions for variation within the framework of the master schedule, whereas, a rigid schedule offers few or no alternatives, and limited opportunity for change.

Definitions and explanations of many of the current schedules refer to the length of time modules as well as the total number of modules available for scheduling. Combinations of available modules constitute an individual student's timetable.

By definition, a time module is generally considered to be the basic building block of time included in a schedule. Usually the schedule consists of multiples of this basic building block of time arranged to provide for long periods of time, short periods of time, and non-scheduled time. A time module may be of any determined length including traditional schedule time allotments typically ranging from 45 to 60 minutes. Recent discussions of so-called flexible-modular schedules usually include time allotments ranging from 15 to 30 minutes in length. Each of these individual time allotments may represent the shortest time period which is desirable for a particular facet of the instructional program.

CONCEPTUAL SCHEMATIC OF TIME MODULES



Time Modules--Traditional Schedule,
(Length designated by minutes)

Time Modules--Modular Schedule,
(Length designated by minutes)

VARIABLE SCHEDULE

Many of the current "flexible modular schedules" are actually variable schedules. A variable schedule may require alteration of the master schedule structure. Typical examples of variable schedules are block schedules, rotating schedules, floating period schedules, varied period schedules, and modular schedules. A variable schedule may make allowances for needed time allotments according to the dictates of specific instructional programs. Instructional periods may be shortened or lengthened according to need, for example, laboratory type classes may find it desirable to meet for extended periods less often than daily. The variable schedule will also provide a change of pace for both students and staff members in that the same class will not meet at the same time five days

per week. Additional opportunities are available with the variable schedule to provide for supervised study periods, as well as activity periods. (See Sample Schedules 1, 2, 3, and 4). The rotating schedules allow for one period of time to be used as desired throughout the daily schedule.

SAMPLE SCHEDULE 1.

ROTATING PERIODS*

(Complete cycle may require several weeks)

Monday	Tuesday	Wednesday	Thursday	Friday
1	6	5	4	3
2	1	6	5	4
3	2	1	6	5
Lunch	Lunch	Lunch	Lunch	Lunch
4	3	2	1	6
5	4	3	2	1

*Any one of these periods could be two periods in length due to the time saved in dropping one period per day, or the period saved could be equally shared by two periods. These periods would, of course, also rotate.

SAMPLE SCHEDULE 2.

ROTATING PERIODS

(Complete cycle may require several weeks)

Monday	Tuesday	Wednesday	Thursday	Friday
1	7	6	5	4
2	1	7	6	5
3	2	1	7	6
Lunch	Lunch	Lunch	Lunch	Lunch
4	3	2	1	7
5	4	3	2	1
6	5	4	3	2

SAMPLE SCHEDULE 3.

VARIABLE PERIOD

(Note differences in length of P.M. classes)

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30	Eng	Eng	Eng	Eng	Eng
9:30	Math	Math	Math	Math	Math
10:30	Soc Stud	Soc Stud	Soc Stud	Soc Stud	Soc Stud
11:30	Typing	Typing	Typing	Typing	Typing
12:00	Lunch	Lunch	Lunch	Lunch	Lunch
12:45	PE	Art	PE	Art	PE
2:15	Sce	Music	Sci	Music	Sci
3:45	DISSMISSAL				

SAMPLE SCHEDULE 4.

VARIABLE BLOCK - HOMEBASE TEACHER - 25 STUDENTS

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30	LANGUAGE ARTS, SOCIAL STUDIES, GENERAL ART AND GENERAL MUSIC MEET IN THREE HOUR HUMANITIES BLOCK				
11:30	PE	HE	PE	HE	PE
12:30	Lunch	Lunch	Lunch	Lunch	Lunch
1:00	IA	IA	IA	IA	IA
2:00	Math	Math	Math	Math	Math
3:00	Sci	Sci	Sci	Sci	Sci
4:00	DISMISSAL				

FLEXIBLE SCHEDULING

A flexible schedule does not require alteration of the master schedule, but does permit changes within the overall schedule structure which will benefit the instructional program. A flexible schedule is designed to provide desired time allotments for specific or general subject fields to be covered by staff members who possess knowledge, skill, and competence in assigned areas. Whereas a major contribution

of a variable schedule is to provide variety, the flexible schedule provides flexibility of time, space, and resources. The basic design of this schedule is patterned after the Pontoon Schedule developed by Dr. William Georgiades, Director of the Center for Excellence in Education, University of Southern California, Los Angeles, California. (See Sample Schedule 5).

SAMPLE SCHEDULE 5.

FLEXIBLE BLOCK

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30	LANGUAGE ARTS, SOCIAL STUDIES, ART, AND MUSIC MEET IN THREE HOUR HUMANITIES BLOCK (130 students, 4 teachers, and 1 aide)				
11:30	PE	HE	PE	HE	PE
12:30	Lunch	Lunch	Lunch	Lunch	Lunch
1:00	IA	Math	Students go to	Math	Math
2:00	IA	Sci	Instructional Stations	Sci	IA
3:00	Math	Sci	of need or	Sci	IA
4:00	DISMISSAL		interest		

MODULAR SCHEDULE

In a general sense, a traditional schedule of assigned time blocks or modules may be considered a modular schedule. Usually, however, smaller blocks of time typically ranging from 15 to 30 minutes constitute a modern modular schedule. The time module representing the basic building block of time is generally used in multiples according to the dictates of the instructional program. (See Sample Schedule 6).

FLEXIBLE MODULAR SCHEDULE

A popular term for recent changes in scheduling, primarily at the secondary level, is flexible-modular-scheduling. Flexible implies that it is changeable according to the needs, and modular indicates that small blocks of time are to be used to implement the program for each individual student as well as for the staff members. Typically, a flexible-modular-schedule is determined on a semester or academic year basis with a schedule cycle usually being of one or two weeks duration. Once this cycle has been determined the so-called flexible modular schedule can, and often does, become just as rigid as the traditional schedule which educators have been trying to modify. It may be that the so-called flexible modular schedule in reality is a variable schedule, with variety being confused with flexibility. (See Sample Schedule 6).

SAMPLE SCHEDULE 6.

FLEXIBLE MODULAR SCHEDULE Assuming 20 minute Modules - One Week Cycle - BIOLOGY - 90 students, minimum of 270 minutes of instruction (80 minutes Large group, 80 minutes small group, and each student is responsible for a minimum of 110 minutes of open lab work).

MODULE	TIME	Monday	Tuesday	Wednesday	Thursday	Friday
1	8:40	LG	O	SG F	O	
2	9:00	LG	P	SG F	P	
3	9:20		E		E	
4	9:40		N	SG E	N	
5	10:00	SG A		SG E		
6	10:20	SG A	L		L	
7	10:40	SG B	A	SG D	A	
8	11:00	SG B	B	SG D	B	
9	11:20	SG C	S		S	
10	11:40	SG C				
11	12:00	Lunch	Lunch	Lunch	Lunch	
12	12:20	Lunch	Lunch	Lunch	Lunch	

13	12:40	SG D		SG C	O	LG
14	1:00	SG D	O	SG C	P	LG
15	1:20	SG E	P		E	
16	1:40	SG E	E	SG B	N	
17	2:00		N	SG B		
18	2:20				L	
19	2:40		L	SG A	A	
20	3:00	SG F	A	SG A	B	
21	3:20	SG F	B		S	

FLEXIBLE PROGRAMMING

An outgrowth of the movement to individualize instruction is flexible programming, whereby a limited amount of time is scheduled on a cyclic basis for each of the basic core subjects. For example, social studies may be required for each student one time during a week's schedule; math, English, and science may be scheduled for one required session each week, also. The remainder of the week (all non-scheduled time) is devoted to: 1) independent study work, 2) group work, 3) formal and informal inquiry groups, or 4) individual help sessions for the students. Flexible programming incorporates and promotes the practice of education by appointment on an individualized basis, emphasizing continuous progress. (See Sample Schedule 7).

SAMPLE SCHEDULE 7.

FLEXIBLE PROGRAMMING Non-scheduled time is for "Education By Appointment."

TIME	Monday	Tuesday	Wednesday	Thursday	Friday
8:30	Eng			Soc Stud	
9:00	Eng	Non	Non	Soc Stud	Non
9:30		Scheduled	Scheduled		Scheduled
10:00	Non	Time	Time	Non	Time
10:30	Scheduled			Scheduled	
11:00	Time			Time	
11:30					
12:00	Lunch	Lunch	Lunch	Lunch	Lunch
12:30	Lunch	Lunch	Lunch	Lunch	Lunch
1:00		Non		Math	
1:30		Scheduled	Non	Non	Math
2:00		Time	Scheduled	Scheduled	Non
2:30			Time	Time	Scheduled
3:00		Science			Time
3:30		Science			
4:00	DISMISSAL				

Non-scheduled time does not indicate complete freedom for staff nor students. Staff and student accountability are vital ingredients in a successful educational program. The staff must be available to guide, coordinate, and direct the instructional processes, and the students must have the opportunities to work and study in many environments under staff supervision.

TRADITIONAL SCHEDULE

The traditional schedule is usually determined by the Carnegie unit of credit which assumes that each subject requires the same amount of time for all students, and that each subject included in the curriculum deserves and requires an equal amount of time. After accepting the above false assumptions, educators have further assumed that the same type of

presentations utilizing the same facilities and the same materials for all students in class groupings usually ranging from 25 to 30 students per class provides optimum education. Twenty-five to 30 students is probably too small for large group instruction and too large for small group work.

Historically, various schedules have developed including the traditional five by five schedule whereby each student takes five classes with each class meeting five days per week, (See Sample Schedule 8); or the popular six by five schedule which permits students to take six courses five days per week. (See Sample Schedule 8 - substitute music for study hall). Modifications of the traditional schedule include block scheduling (See Sample Schedules 4 and 5) whereby a block of time is assigned to one or more subject fields for the students and may be taught by one or more teachers. Back to back scheduling (See Sample Schedule 9) is another variation of the traditional schedule, whereby two classes of students who are taking two specified courses are assigned to the same time slot(s) (sometimes two periods) in the schedule. For example, students enrolled in American History and American Literature may be assigned to second (or second and third) period(s) each day in adjoining instructional spaces. The instructors have the opportunity to meet with the total group of students, with the individual classes, and to correlate American Literature with American History so that the relationships between the two subject fields will be more readily apparent.

SAMPLE SCHEDULE 8.

Traditional 5 X 5 and 6 X 5.
For 6 X 5, Replace Study Hall with a course.

TIME	Monday	Tuesday	Wednesday	Thursday	Friday
8:30	Eng	Eng	Eng	Eng	Eng
9:30	Math	Math	Math	Math	Math
10:30	Study Hall	Study Hall	Study Hall	Study Hall	Study Hall
11:30	Homeroom	Homeroom	Homeroom	Homeroom	Homeroom
12:00	Lunch	Lunch	Lunch	Lunch	Lunch
12:30	Soc Stud	Soc Stud	Soc Stud	Soc Stud	Soc Stud
1:30	Science	Science	Science	Science	Science
2:30	PE	PE	PE	PE	PE
3:30	DISMISSAL				

SAMPLE SCHEDULE 9.

BACK TO BACK SCHEDULE

PERIOD	Monday	Tuesday	Wednesday	Thursday	Friday
1	Science	Science	Science	Science	Science
2	American Literature	American Literature	American Literature	American Literature	American Literature
3	American History	American History	American History	American History	American History
	Lunch	Lunch	Lunch	Lunch	Lunch
4	Math	Math	Math	Math	Math
5	PE	PE	PE	PE	PE
6	Art	Art	Art	Art	Art

SUMMARY

Progressive steps should be taken in implementing time tables designed to assist in scheduling instructional programs. It should be recognized that most programs and schedules are transitional.

Lloyd Trump, in his model school plan, emphasizes that schedules do not need to be made by computers, that students and teachers should construct the schedule which is determined by their individual needs. His current plan most closely resembles the sample schedule number 7 in this paper.

It must be reiterated that developing a flexible schedule is not an educational panacea, nor is it apt to be successful until after operational modification. Initially it necessitates more work on this part of student and teacher, but ultimately offers an opportunity to enrich the teaching-learning process to the point where responsibility for learning is not the sole property of the teacher but is shared in increasing amounts by the student who pursues an educational plan best suited to his individual needs and abilities.

Even though a schedule may force change, it should be viewed as a vehicle to assist the implementation of an ever changing curriculum, and not as an end product in itself. The schedule will probably never be perfect; however, if flexible people implement flexible scheduling, the probabilities of individualizing instruction are enhanced.

END

DEPT.OF HEALTH
EDUCATION AND
WELFARE
U.S. OFFICE OF
EDUCATION
ERIC
DATE FILMED

2 12 74